

CLAIMS

1 1. A wave-shaped capacitor, formed over a base conductive layer, said base
2 conductive layer over a base insulator layer on a die, the capacitor including:
3 a wave-shaped pattern in the base conductive layer comprising at least two
4 adjacent trenches in the base conductive layer;
5 a multilayer structure contoured over the base conductive layer, the multilayer
6 structure comprising:
7 a first plate layer in electrical contact with the base conductive layer;
8 an insulating layer over the first plate layer;
9 a second plate layer over the insulating layer; and
10 a interconnect layer over the multilayer structure, including at least one
11 interconnection with the second plate layer.

1 2. The device of claim 1, wherein the at least two adjacent trenches are formed
2 by a lithographic or direct writing process and the multilayer structure has a thickness
3 along the sidewalls of the trench that is less than half of a minimum feature size of the
4 lithographic or direct writing process.

1 3. The device of claim 1, wherein the base conductive layer and the first
2 conductive layer are the same structure.

1 4. The device of claim 3, wherein the at least two adjacent trenches are formed
2 by a lithographic process and the multilayer structure has a thickness along the
3 sidewalls of the trench that is less than half of a minimum feature size of the
4 lithographic or direct writing process.

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